

REMARKS

Entry and consideration of this Amendment are respectfully requested.

Claims 1-8:

As recited in the present claim 1, the present invention requires “a resistor for limiting a current flowing through [a] light emitting element disposed between an element within [a] voltage control apparatus for lighting [the] light emitting element, and [an] input terminal.” *See* claim 1. This feature is not disclosed, taught or suggested by the Maruyama reference.

As discussed in Applicant’s Response dated February 12, 2002, in Maruyama, the transistor **14** is provided for preventing a malfunction when a leak current flows into the L-terminal (preventing a control device from starting an operation erroneously by the flowing of a leak current in the case where an ignition switch is in the off position). Thus, the transistor **14** does not “light” a light emitting element (i.e. lamp). Maruyama makes it clear that it is the transistor **152** which drives the lamp, it is not the transistor **14**. *See* Maruyama, page 191, 2nd col., 3rd para.

In fact, Maruyama clearly discusses the circuit constituted by the transistors **14** and **141** and the resistors **142**, **143** and **144**. In Maruyama when a vehicle stops the entire circuit becomes a “leak compensation circuit” so as to avoid starting in error if a leak current flows into the L-terminal. Thus, Maruyama discloses a circuit for compensating the starting/not starting of a vehicle generator if a leak current flows into the L-terminal, and is not related to a circuit for driving a charge lamp (i.e. item 4). The Maruyama reference uses the leak compensation resistor **143** and a switch means (the transistor **14**) to accomplish this feature. Thus, even if the transistor

14 is removed from the overall circuit disclosed in Figure 1 (of Maruyama) the function of the lamp **4** will not be changed. As such, Applicant respectfully points out that the transistor **14** does not "light" the lamp **4**.

Additional support for Applicant's position is found in the fact that, in Maruyama, it is disclosed that the charge lamp **4** is turned on through a transistor **152**, and it is the transistor **152** which lights the light emitting element (lamp). See Maruyama, page 191, 2nd col., 3rd para. Maruyama discloses only that a diode is placed between the lamp **4** and the transistor **152**. See Figure 1, of Maruyama. There is no disclosure of any kind of placing a resistor between these elements in the Maruyama circuit as required by claim 1.

In reviewing the Maruyama disclosure, and Figures, it is clear that the diode between the lamp **4** and the transistor **152** fails to provide a current limiting function, as that of a resistor. In fact, the diode is used to ensure that the voltage of the L-terminal be larger than a predetermined value when the transistor **152** is conductive. As shown in Figure 7, of Maruyama, when the L-terminal voltage is detected to be larger than a predetermined value, the transistors **171** and **172** are conductive so that the circuit begins to operate. At this time, even if the diode did not exist, the transistor **152** becomes conductive at the same time when the control unit starts. Then the L-terminal voltage is lowered by lighting the charge lamp **4**, at which time it is not possible to keep the transistor **171** conductive.

Therefore, by inserting the diode (shown above), and utilizing a lowered voltage generated by the diode, the L-terminal voltage is ensured to be larger than a predetermined value so as to keep the transistor **171** conductive, even if the transistor **152** is conductive. Similar to

Figure 7, in Figures 1 and 4 of Maruyama, a diode is inserted in order to have the same effect (although a comparator 13 is used in Figures 1 and 4 instead of the transistor in Figure 7).

Because Maruyama makes it clear that it is the transistor 152 which is used to light the lamp 4, and there is no disclosure, of any kind, or a resistor, or current limiting device, between the transistor 152 and the lamp 4, Maruyama fails to disclose "each and every" aspect of the claimed invention. Additionally, as set forth in the foregoing discussion regarding the operation of the system in Maruyama, the transistor 14 does not light the lamp 4 as required by the present invention, and claimed in claim 1, and as such, cannot be properly asserted as satisfying any of the elements set forth in claim 1.

With regard to claims 6-8, since these claims depend on claims 1, 2 and 4, respectively, and because the ordinary skill of the art fails to cure the deficient teachings of Maruyama, with regard to the independent claims, Applicants submits that claims 6-8 are also allowable, at least by reason of their dependency.

Conclusion:

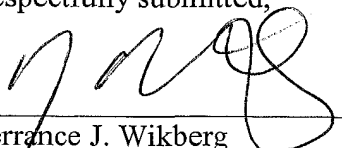
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

PRELIMINARY AMENDMENT
U.S. Application No. 09/688,350

Our Ref.: Q61020
Art Unit: 2834

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,


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Date: June 3, 2002

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended) A voltage control apparatus for a vehicle generator comprising:

an input terminal for inputting a voltage of a battery through an ignition switch
and a light emitting element connected in series with said ignition switch ~~and driven by a~~
~~low dissipation power,~~

a rotor coil of said vehicle generator started in excitation when a voltage at said
input terminal exceeds a predetermined value, and

a resistor for limiting a current flowing through said light emitting element,
disposed between an element within said voltage control apparatus for lighting driving
said light emitting element, and said input terminal.

2. (Amended) A voltage control apparatus for a vehicle generator comprising:

an input terminal for inputting a voltage of a battery through an ignition switch
and a light emitting element connected in series with said ignition switch ~~and driven by a~~
~~low dissipation power,~~ and

a rotor coil of said vehicle generator started in excitation when a voltage at said
input terminal exceeds a predetermined value, wherein

said light emitting element is lighted ~~lightened~~ by a current which is inputted into said input terminal for starting an operation of said voltage control apparatus, and wherein said current is limited by a resistor disposed between said light emitting element and an element within said voltage control apparatus for lighting said light emitting element.

4. (Amended) A voltage control apparatus for a vehicle generator comprising:

an input terminal for inputting a voltage of a battery through an ignition switch and a light emitting element connected in series with said ignition switch ~~and driven by a low dissipation power,~~

a rotor coil of said vehicle generator started in excitation when a voltage at said input terminal exceeds a predetermined value, and

a circuit for detecting the voltage of said input terminal and starting said voltage control apparatus, said circuit being is arranged to be shutdown after said vehicle generator starts electric power generation operation, wherein said circuit includes a resistor for limiting current passing through said light emitting element, disposed between an element within said voltage control apparatus for lighting said light emitting element, and said input terminal.